

CUSTOMER LOOP BRIDGE LIFTERS (1574A AND 1574B INDUCTORS)

1. GENERAL

1.01 This section covers the description and use of bridge lifters (1574A and 1574B inductors) and Bridge Lifter Record Forms E-4991, E-4991L, and E-4991R.

1.02 This section is reissued to add Exhibit 7 (previously shown in Addendum) which describes the use of the Bridge Lifter Record, Forms E-4991, E-4991L, and E-4991R, as a Bridge Main Frame (B.M.F.) Record. A Bridge Main Frame Record provides a reference file for bridged party lines in short loop plant, where bridge lifters are not required.

1.03 Bridge lifters reduce transmission losses on bridged cable pairs. This permits the bridging of cable pairs serving party line customers and makes it practicable to maintain high party line fills.

2. DESCRIPTION

2.01 Bridge lifters will work on dial or manual lines with any standard 20-cycle ringing current and with tube or nontube type ringers. Bridge lifters pass ringing and dialing current with negligible distortion, but under certain conditions they may cause distortion in the audible ringback.

2.02 Bridge lifters are of two types, 1574A and 1574B (see Exhibits 1 and 2). The 1574B unit is designed to eliminate inductive noise where the bridged stations are equipped with grounded, nontube type ringers.

3. USE

3.01 Bridge lifters will usually be installed in the central office. However, they can be placed on cable pairs at outside plant locations, as directed by Engineering.

3.02 With certain exceptions, bridge lifters located in the central office shall be assigned:

- (a) To each cable pair bridged at the distributing frame for party line association. For example, a four-party line may be bridged to as many as four cable pairs if the maximum number of ringers is not exceeded.

- (b) To each cable pair serving a main station and its off-premise extension when they are bridged at a central office distributing frame.

- (c) To cable pairs associated with Telephone Answering Service, as follows (see Exhibit 3):

- (1) When Telephone Answering Service lines are equipped with concentrator-identifier equipment, a bridge lifter shall be assigned to the customer's cable pair only.

- (2) When Telephone Answering Service lines are not equipped with concentrator-identifier equipment, a bridge lifter shall be assigned to the customer's cable pair and the cable pair serving the Telephone Answering Service.

3.03 It may not be economical to use bridge lifters for all Telephone Answering Services. Questions concerning application for these services shall be directed to Engineering.

3.04 Do not use bridge lifters on:

- (a) Loops using long loop sets
- (b) Program loops
- (c) Teletypewriter loops
- (d) Loops with 500 E/F-type sets which have a plunger-monitor feature
- (e) Loops equipped with long line equipment

3.05 It may not be economical to use bridge lifters in central office areas where there is a large concentration of party line customers in the short loop plant. Specific cables or cable complements may be marked on the cable records, to show that bridge lifters need not be used.

If party lines are bridged in the short loop plant areas, a record of these lines may be made by converting Bridge Lifter Record, Forms E-4991, E-4991L, and E-4991R, to a Bridge Main Frame (B.M.F.) Record as described on Exhibit 7.

3.06 Questions concerning the need for bridge lifters shall be directed to Engineering.

4. FORMS

4.01 Form E-4991 is provided on green-colored stock, 8-3/8 inches by 10-7/8 inches, for filing in standard loose-leaf binders. Each sheet is printed on both sides, providing spaces for listing 100 bridge lifters on each side (see Exhibit 4).

4.02 Forms E-4991L and E-4991R are provided on green-colored cards, 5 inches by 8 inches. Suffix letters L and R indicate left and right index tab positions, respectively. Each card is printed on both sides, providing spaces for listing a total of 100 bridge lifters. The two forms are designed to be used in pairs, for filing in a visible type file (see Exhibit 6).

5. ASSIGNMENT PROCEDURES

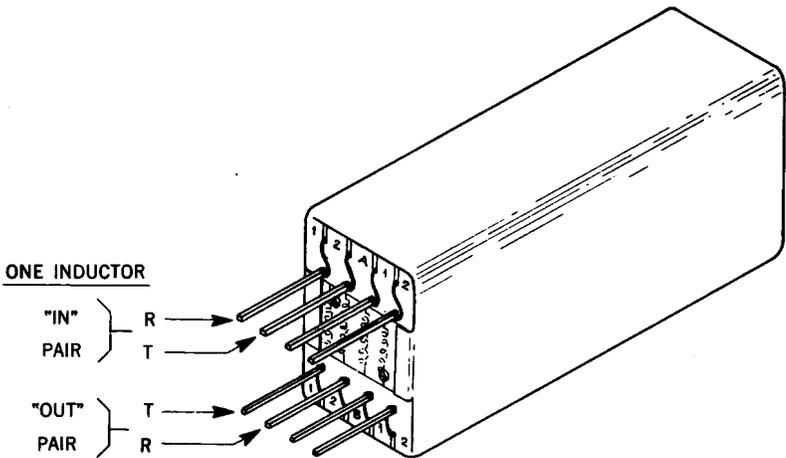
5.01 The Plant Assignment force shall maintain a record of central office bridge lifters on a Bridge Lifter Record, Forms E-4991 or

E-4991L and E-4991R. This record will help to determine the availability of bridge lifters and to assign spare units by number. It also provides a record to be used for association of party lines (see Exhibits 4 and 5).

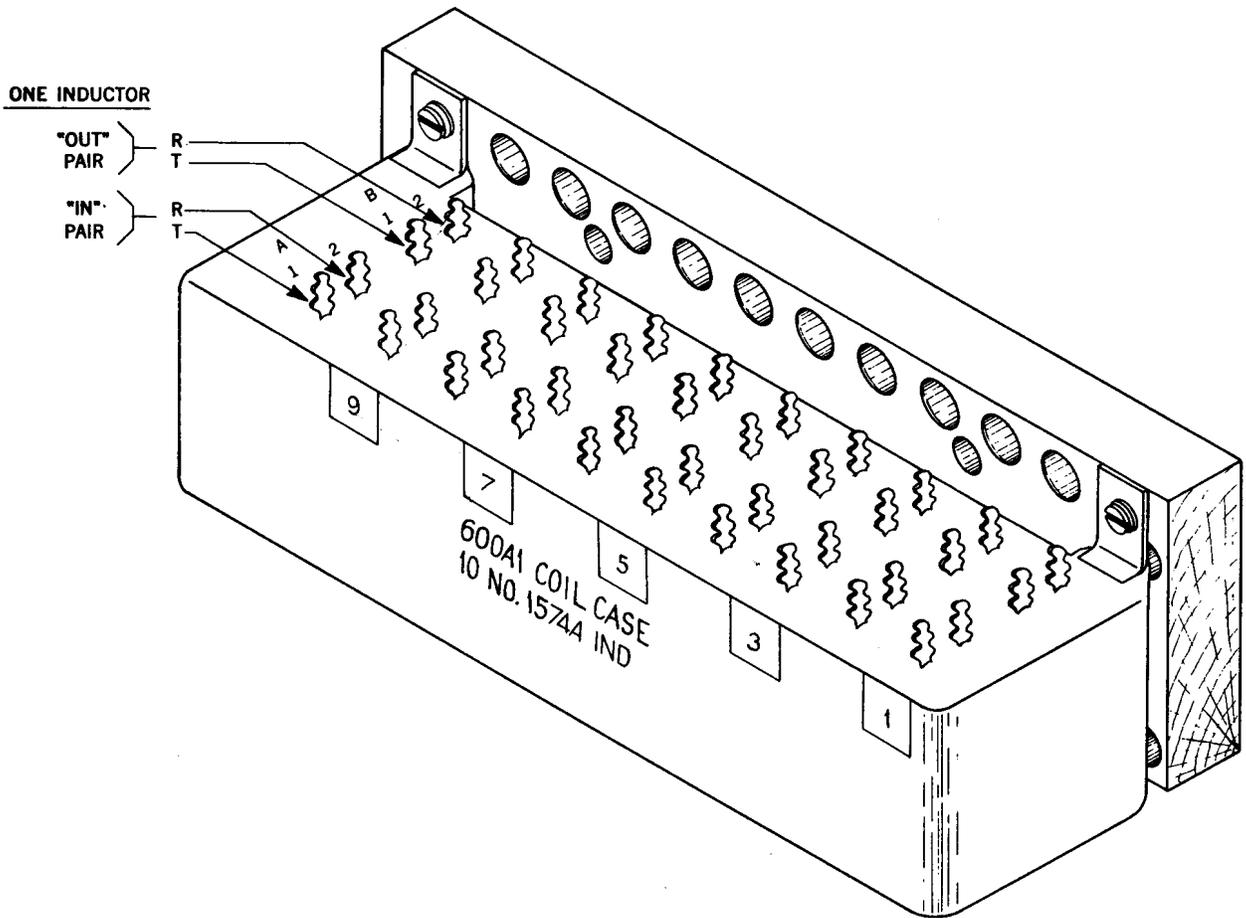
5.02 When a bridge lifter is assigned to a customer's cable pair, enter the bridge lifter number in the "C.O. Equipment" space on the service order, e.g., BL 5. The central office bridge lifter number shall also be entered on the exchange customer cable record, as shown in Section M24.33.

5.03 In dedicated outside plant areas, enter in the Other Information column of the Dedicated Plant Assignment Card the bridge lifter number used for bridging party lines. In this case, no entry will be required on the customer cable record.

EXHIBIT 1



601A1 Coil Case — Containing Two 1574A or Two 1574B Inductors



600A1 Coil Case — Containing Ten 1574A or Ten 1574B Inductors

EXHIBIT 2

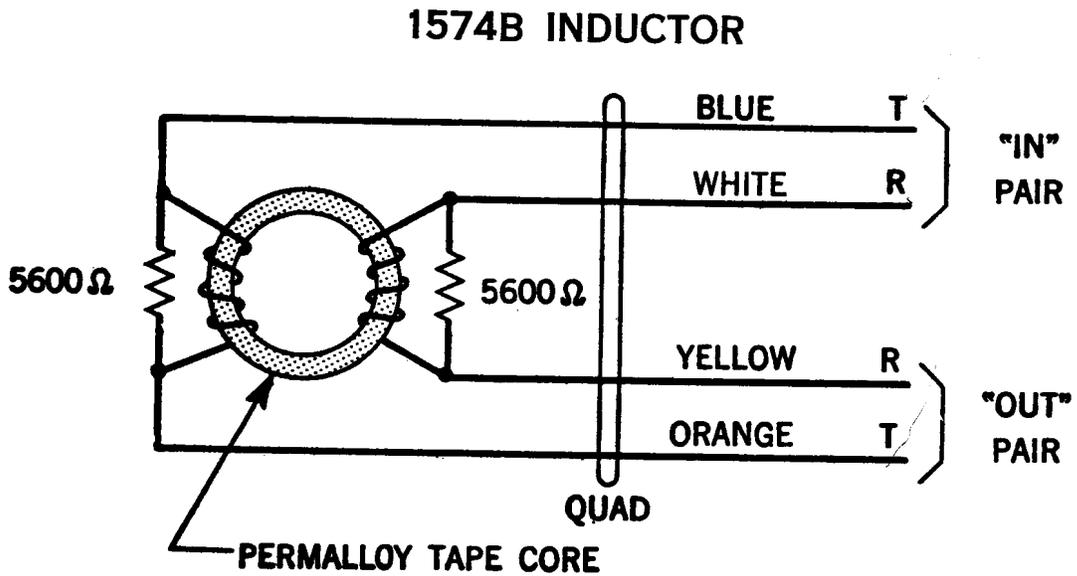
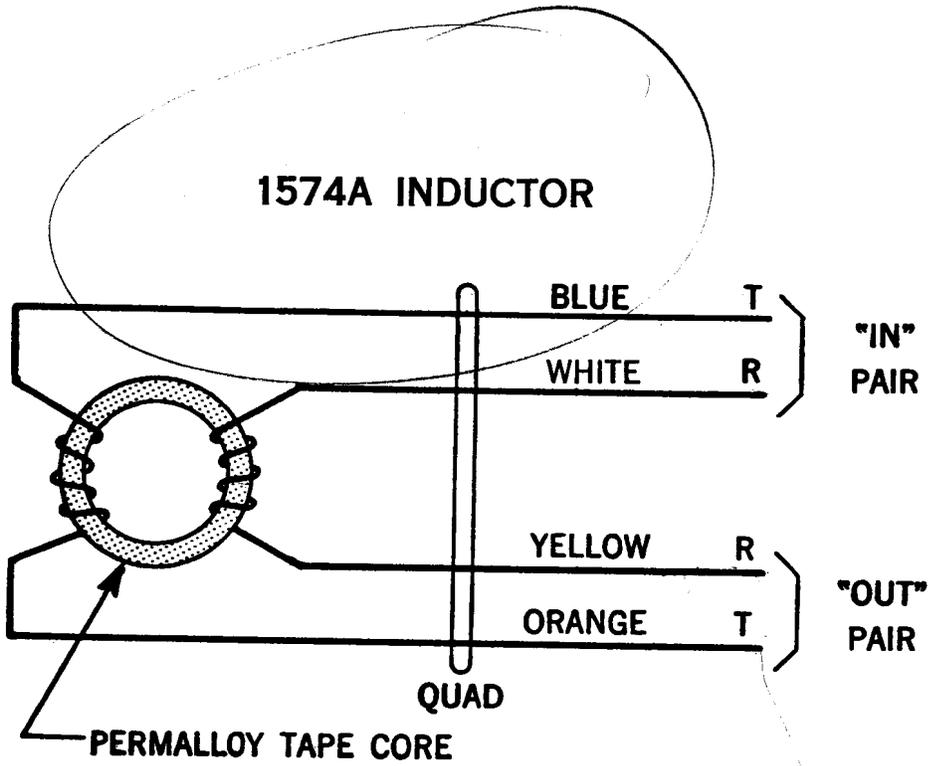
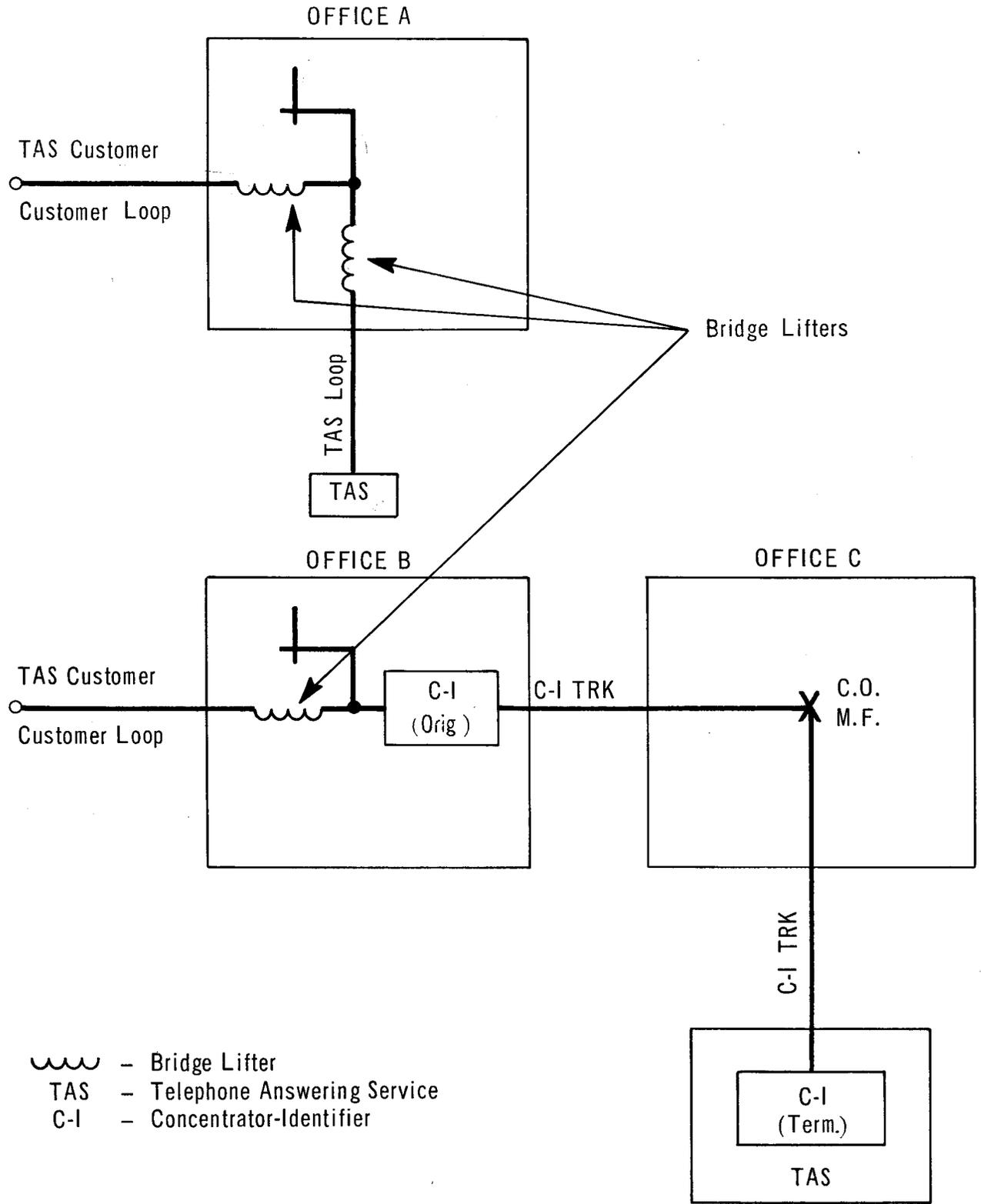


EXHIBIT 3



GENERAL NOTES ON EXHIBIT 4

1. This entry shows bridge lifter 01 assigned to 7-2836, the ring party of a two-party line working in cable 22, on pair 13, and central office equipment 41-09. The bridged tip party is assigned bridge lifter 02 and is working in cable 44, on pair 1936.
2. The heavy lines indicate that bridge lifters 11, 12, 13, and 14 (parties 1, 2, 3, and 4, respectively), are being used for four-party bridging. The central office equipment 38-10 is entered once. Bunching block 62 has been assigned to this service.
3. Telephone number 7-3456 has an off-premise extension bridged in the central office. The cable and pair for the main station are entered in the "Ring" spaces. The cable and pair for the off-premise extension are entered in the "Tip" spaces.
4. Telephone number 2-4567 is bridged in the central office to a Telephone Answering Service not equipped with concentrator-identifier equipment. The Telephone Answering Service listed number, cable, pair, class of service, and transmission zone are entered in the "Tip" spaces. It is recommended that a group of bridge lifters be reserved for this type of service.
5. When a Telephone Answering Service is served by a concentrator-identifier, a bridge lifter is assigned only to the customer's cable pair. It is recommended that a block of bridge lifters be reserved for this service. Central office equipment associated with even-numbered lifters is entered to the right of a vertical line in the Central Office Equipment space. Central office equipment associated with odd-numbered lifters is entered to the left of this line. Bridge lifters 47 through 58 have been reserved for use with concentrator-identifier number two.
6. Telephone numbers 6-8790, 6-9264, and 6-8468, parties 1, 2, and 3, respectively, are working in cable 27, on pair 250, central office equipment 10-20, and bridge lifter number 67. The fourth party, 8-7653, is using bridge lifter number 70 in cable 44, on pair 139. Circle the bridge lifter number when the bridge lifter is connected to a cable pair serving two or more parties.
7. When large quantities of bridge lifters are used, it may be desirable to use a separate record for each type of service. Bridge lifters reserved for a particular type of service would be blocked out on all records except where assignments will be made. Bridge lifters 75 to 100 will be assigned from the two-party record.

EXHIBIT 4

PRINTED IN U.S.A.

FORM E-4991

BRIDGE LIFTER RECORD

OFFICE CYPRESS

RING (PTY LINES)						CENTRAL OFFICE EQUIPMENT	TIP (PTY LINES)						
LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ		LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ	
01	7-2836	22	13	2FR	5	41-09	02	8-2504	44	1936	2FR	5	
03						①	04						
05							06						
07							08						
09							10						
11	8-7166	31	109	4FR	5	38-10	12	8-2619	31	12	4FR	5	
13	7-1563	22	130	4FR	5	BB 62	14	8-5678	14	1300	4FR	5	
15						②	16						
17							18						
19							20						
21							22						
23	7-3456	49	375	1FB	5	45-60	24	7-3456	34	756	EXF	5	
25						③	26						
27							28						
29							30						
31							32						
33	2-4567	34	123	1FB	5	46-23	34	4-1181	19	1776	PJG	2	
35						④	36						
37							38						
39							40						
41							42						
43							44						
45							46						
47	6-7890	34	126	1FB	5	23-19	16-12	48	5-6789	20	345	1FB	5
49	7-2060	34	182	1FB	5	26-62		50					
51								52					
53								54					
55								56					
57								58					
59						⑤	60						
61							62						
63							64						
65							66						
67	6-8790	27	250	4FR	5	10-20	68	6-9264	27	250	4FR	5	
69	6-8468	27	250	4FR	5	BB 41	70	8-7653	44	139	4FR	5	
71						⑥	72						
73							74						
75							76						
77	SEE 2PTY RECORD						78	SEE 2PTY RECORD					
79													
81													
83													
85													
87						88							
89						⑦	90						
91							92						
93							94						
95							96						
97							98						
99							100						

GENERAL NOTES ON EXHIBIT 5

1. A vacancy exists on this two-party bridge lifter group.
2. A vacancy exists on this four-party bridge lifter group. This will be a first choice assignment for a four-party line station using a separate cable pair.
3. Service assigned to BL 67 has been disconnected (see Note 6, Exhibit 4). When more than one party is working on a cable pair, the first working party governs the bridge lifter assignment. Parties 1, 2, and 3 were working on pair 250. Pair 250 was connected to BL 67, party 1 position. The jumper from pair 250 was transferred from BL 67 to BL 68, party 2 position, and circled. This transfer will be entered on the frame copy of the service order.

EXHIBIT 5

PRINTED IN U.S.A.

FORM E-4991

BRIDGE LIFTER RECORD

OFFICE CYPRESS

RING (PTY LINES)						CENTRAL OFFICE EQUIPMENT	TIP (PTY LINES)					
LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ		LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ
01	7-2836	22	13	2 FR	5	41-09	02					
03						↑	04					
05						①	06					
07							08					
09							10					
11						38-10	12	8-2619	31	12	4 FR	5
13	7-1563	22	130	4 FR	5	BB62	14	8-5678	14	1300	4 FR	5
15						↑	16					
17						②	18					
19							20					
21							22					
23							24					
25							26					
27							28					
29							30					
31							32					
33							34					
35							36					
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41							42					
43							44					
45							46					
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49							50					
51							52					
53							54					
55							56					
57							58					
59							60					
61							62					
63							64					
65							66					
67						10-20	68	6-9264	27	250	4 FR	5
69	6-8468	27	250	4 FR	5	BB-41	70	8-7653	44	139	4 FR	5
71						↑	72					
73						③	74					
75							76					
77							78					
79							80					
81							82					
83							84					
85							86					
87							88					
89							90					
91							92					
93							94					
95							96					
97							98					
99							100					

EXHIBIT 6

BRIDGE LIFTER RECORD												OFFICE _____	
RING (PARTY LINES)						CENTRAL OFFICE EQUIPMENT	TIP (PARTY LINES)						
LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ		LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ	
01							02						
03							04						
05							06						
07							08						
09							10						
11							12						
13							14						
15							16						
17							18						
19							20						
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81							82					
83							84					
85							86					
87							88					
89							90					
91							92					
93							94					
95							96					
97							98					
99							00					

OFFICE _____
BRIDGE LIFTER RECORD

FROM _____ TO _____

FORM E-4991 L (6-63) B S.P. M24.54 PRINTED IN U.S.A.

EXHIBIT 7

PRINTED IN U.S.A.

FORM E-4991

① → ~~B.M.F. BRIDGE LIFTER RECORD~~ →

OFFICE **CYPRESS**

RING (PTY LINES)						CENTRAL OFFICE EQUIPMENT	TIP (PTY LINES)					
B.M.F. LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ		B.M.F. LIFTER NUMBER	TELEPHONE NUMBER	CABLE	PAIR	SERV	TZ
01	2-4761	11	12	2FR	2	45-35	02	6-0218	14	71	2FR	2
03						② ↑	04					
05							06					
07							08					
09							10					
11						27-62	12	8-1627	27	40	2FR	2
13						③ ↑	14					
15							16					
17							18					
97							98					
99							00					

GENERAL NOTES ON EXHIBIT 7

A record of party lines in short loop plant may be maintained on a Bridge Main Frame (B.M.F.) Record using Forms E-4991, E-4991L, and E-4991R. These lines would not require bridge lifters for transmission reasons and would not appear on the Bridge Lifter Record. Posting these party lines to a B.M.F. Record will provide a reference file for the association of short loop party lines.

When a B.M.F. number is used, this number shall be entered in the Other Information column of the Dedicated Plant Assignment Card. No entry will be required on the cable record charts.

Note: B.M.F. numbers are for record purposes only.

1. The Bridge Lifter Record, Forms E-4991, E-4991L, and E-4991R, is used as a Bridge Main Frame Record by making the modifications as indicated on the exhibit.
2. This entry shows a ring party 2-4761 working in cable 11, pair 12, bridged at the main distributing frame with a tip party 6-0218 working in cable 14, pair 71, and using central office equipment 45-35. A bridge lifter is not required for transmission reasons.
3. This entry shows a tip party 8-1627 working in cable 27, pair 40, and using central office equipment 27-62. It is not bridged at the main distributing frame with a ring party. This will make available a first choice assignment for a ring two-party station using a separate cable pair that does not require a bridge lifter for transmission reasons.